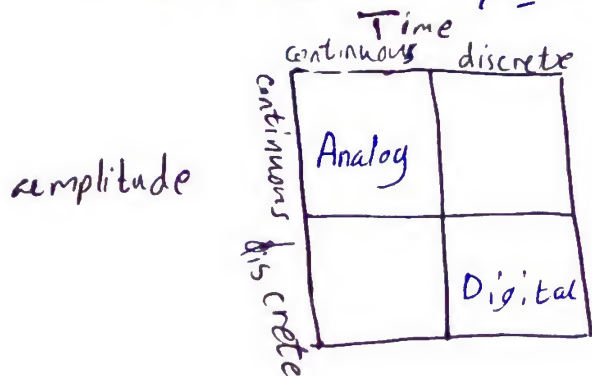


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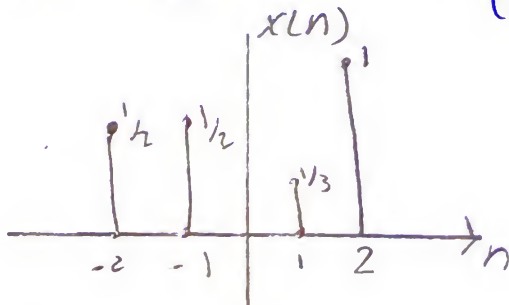
--- >> sheet 1

* operations on Signal :-

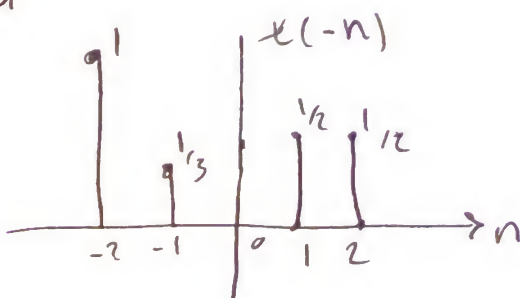
- + Representation
- + shifting
- + folding
- + Adding
- + Multiplication

① Ex: $x(n) = \{ \frac{1}{2}, \frac{1}{2}, 0, \frac{1}{3}, 1 \}$

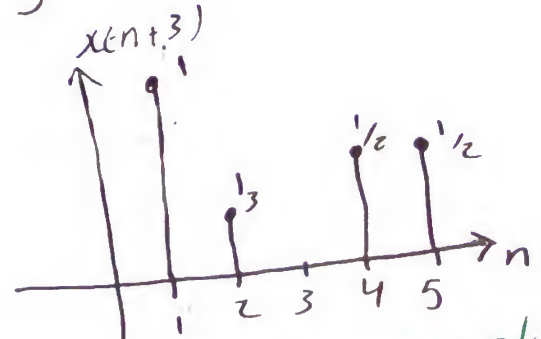
① Fold ② Shift (delay) (3)



* Fold



* Delay by (3)



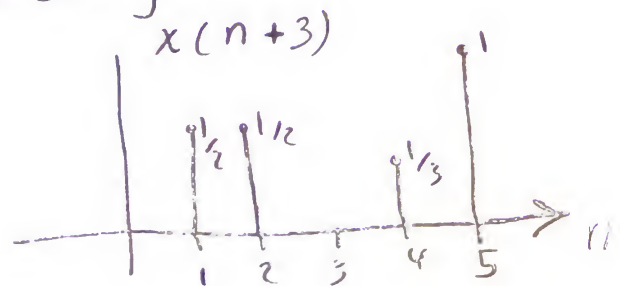
② Ex: Same previous example

but

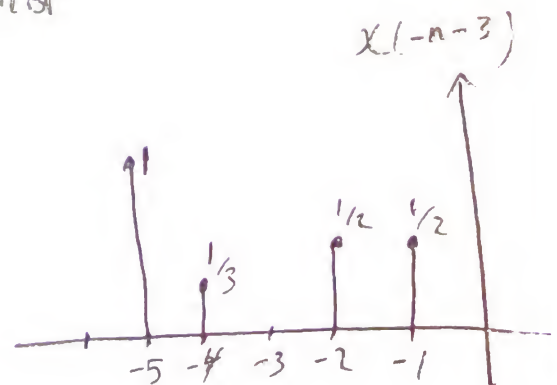
① delay by (3)

② fold

* Delay



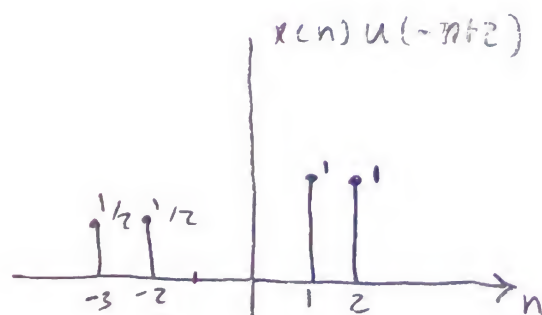
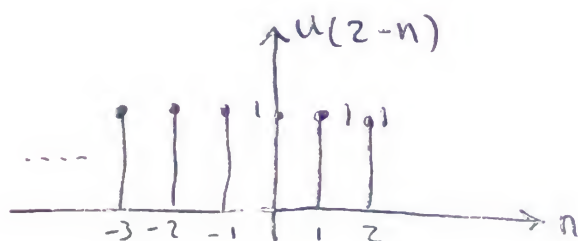
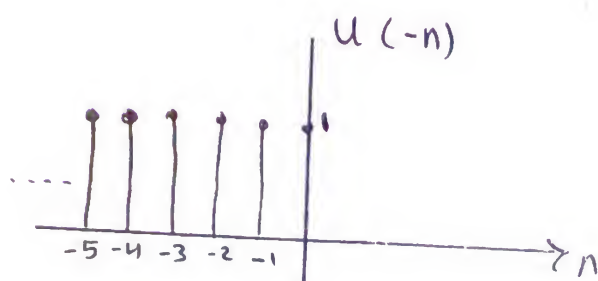
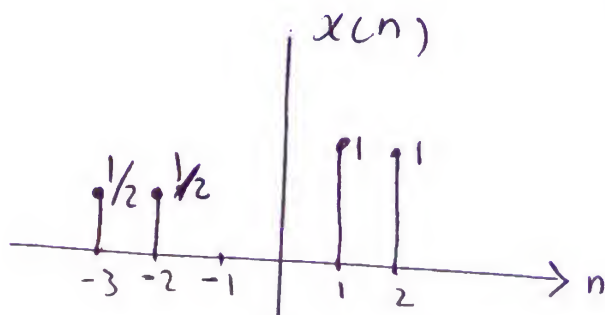
* Fold



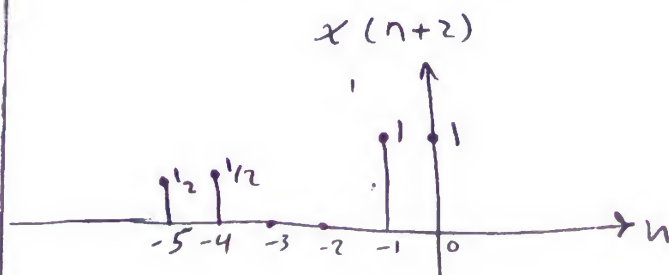
Fold then delay

≠ delay then fold ①

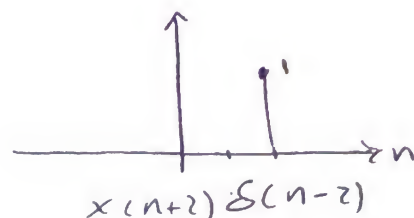
③ Ex. $x(n) = \{1/2, 1/2, 0, 0, 1, 1\}$
 Find $x(n)u(2-n)$



④ Previous but
 Find $x(n+2)\delta(n-2)$

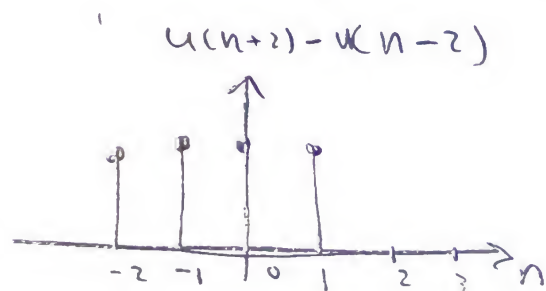
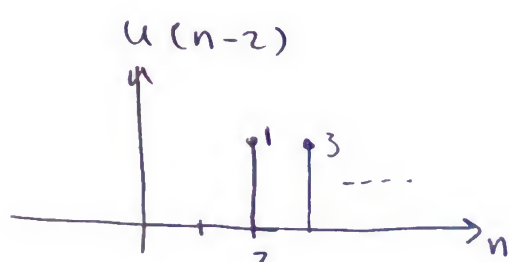
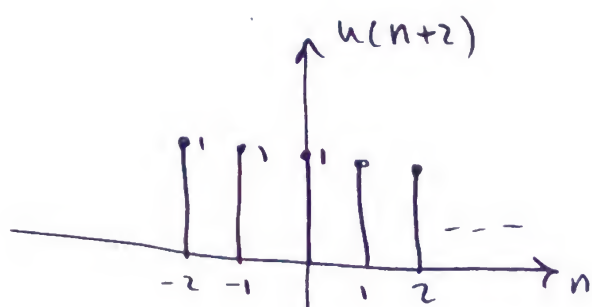


$\delta(n-2)$

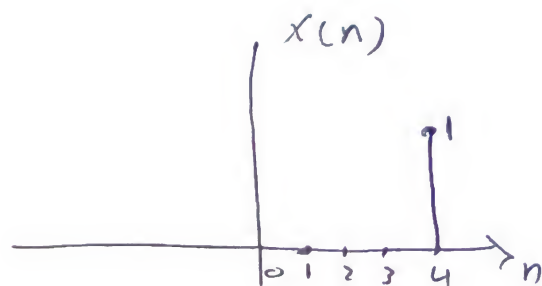


⇒ Turn Over

⑤ Ex $x(n) = u(n+2) - u(n-2)$

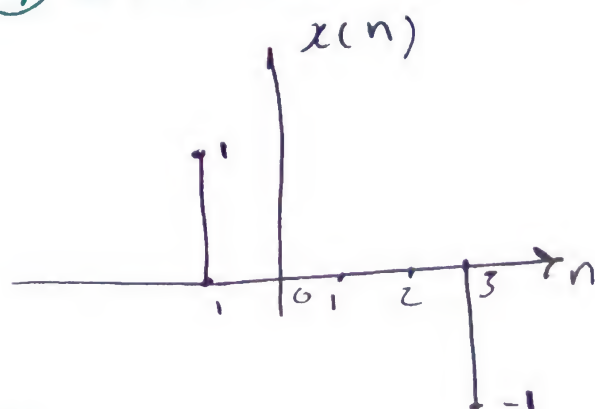


⑥ $x(n) = u(n-2) \delta(n-4)$



$x(n) = \{0, 0, 0, 0, 1\}$

⑦ $x(n) = \delta(n+1) - \delta(n-3)$



⑧ $x(n) = u(n) + r(n-2) - r(n-5) - r(n-8) + r(n-11)$

⑨ $x(n) \{2, 1, 1/2, 1/4, 1/8\}$

Find:

- $x(-n-2)$
- $x(n-2)$
- $x(n+2)$
- $x(-n+2)$

8, 9 Report